

**AIR LIQUIDE****SAFETY DATA SHEET**

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Revised edition no : 1

Date : 16/3/2006

Supersedes : 0/0/0

AIR, REFRIGERATED LIQUID**AL000B**

Label 2.2 : Non flammable, non toxic gas.



Label 5.1 : Oxidizing substances.



O : Oxidizing

1 IDENTIFICATION OF THE SUBSTANCE / PREPARATION AND OF THE COMPANY / UNDERTAKING

Trade name : AIR, REFRIGERATED LIQUID
 MSDS No : AL000B
 Company identification : AIR LIQUIDE SA
 France
 See paragraph 16 "OTHER INFORMATION"
 Emergency phone nr : See paragraph 16 "OTHER INFORMATION"

2 COMPOSITION / INFORMATION ON INGREDIENTS

Substance / Preparation : Preparation.

Substance name	Contents	CAS No	EC No	Index No	Classification
Nitrogen	:	7727-37-9	231-783-9	-----	
Oxygen	:	7782-44-7	231-956-9	008-001-00-8	O; R8

Contains no other components or impurities which will influence the classification of the product.

3 HAZARDS IDENTIFICATION

Hazards identification : Refrigerated liquefied gas. Contact with product may cause cold burns or frostbite. Oxidant. Strongly supports combustion. May react violently with combustible materials.

4 FIRST AID MEASURES**First aid measures**

- Inhalation : Not hazardous.
 - Skin/eye contact : Immediately flush eyes thoroughly with water for at least 15 minutes. In case of frostbite spray with water for at least 15 minutes. Apply a sterile dressing. Obtain medical assistance.

5 FIRE-FIGHTING MEASURES

Flammable class : Non flammable.
 Specific hazards : Exposure to fire may cause containers to rupture/explode. Supports combustion.
 Hazardous combustion products : None.
 Extinguishing media :
 - Suitable extinguishing media : All known extinguishants can be used.
 Specific methods : If possible, stop flow of product. Move away from the container and cool with water from a protected position.
 Special protective equipment for fire fighters : None.



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6 ACCIDENTAL RELEASE MEASURES

- Personal precautions** : Evacuate area.
Ensure adequate ventilation.
Eliminate ignition sources.
- Environmental precautions** : Prevent from entering sewers, basements and workpits, or any place where its accumulation can be dangerous.
Try to stop release.
- Clean up methods** : Ventilate area.

7 HANDLING AND STORAGE

- Storage** : Keep container below 50°C in a well ventilated place.
Segregate from flammable gases and other flammable materials in store.
Liquid air should only be stored in closed cryogenic receptacles.
- Handling** : Open valve slowly to avoid pressure shock.
Suck back of water into the container must be prevented.
Do not allow backfeed into the container.
Use no oil or grease.
Use only properly specified equipment which is suitable for this product, its supply pressure and temperature. Contact your gas supplier if in doubt.
Refer to supplier's container handling instructions.

8 EXPOSURE CONTROLS / PERSONAL PROTECTION

- Personal protection** : Do not smoke while handling product.
Ensure adequate ventilation.
Protect eyes, face and skin from liquid splashes.

9 PHYSICAL AND CHEMICAL PROPERTIES

- Physical state at 20 °C** : Refrigerated liquefied gas.
- Colour** : Colourless.
- Odo(u)r** : None.
- Molecular weight** : 28.9
- Melting point [°C]** : -216
- Boiling point [°C]** : -194
- Critical temperature [°C]** : -142
- Vapour pressure, 20°C** : Not applicable.
- Relative density, gas (air=1)** : 1
- Relative density, liquid (water=1)** : Not applicable.
- Solubility in water [mg/l]** : No reliable data available.
- Other data** : Gas/vapour heavier than air. May accumulate in confined spaces, particularly at or below ground level.

10 STABILITY AND REACTIVITY

- Stability and reactivity** : May react violently with combustible materials.
May react violently with reducing agents.
Violently oxidises organic material.
Liquid spillages can cause embrittlement of structural materials.



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11 TOXICOLOGICAL INFORMATION

Toxicity information : No known toxicological effects from this product.

12 ECOLOGICAL INFORMATION

Ecological effects information : Can cause frost damage to vegetation.

13 DISPOSAL CONSIDERATIONS

General : Do not discharge into any place where its accumulation could be dangerous.
Contact supplier if guidance is required.

14 TRANSPORT INFORMATION

UN No. : 1003

H.I. nr : 225

ADR/RID

- **Proper shipping name** : AIR, REFRIGERATED LIQUID

- **ADR Class** : 2

- **ADR/RID Classification code** : 3 O

- **Labelling ADR** : Label 2.2 : Non flammable, non toxic gas.
Label 5.1 : Oxidizing substances.

Other transport information : Avoid transport on vehicles where the load space is not separated from the driver's compartment.
Ensure vehicle driver is aware of the potential hazards of the load and knows what to do in the event of an accident or an emergency.
Before transporting product containers :
- Ensure there is adequate ventilation.
- Compliance with applicable regulations.

15 REGULATORY INFORMATION

EC Classification : Not included in Annex I.
Proposed by the industry.
O; R8

EC Labelling

- **Symbol(s)** : O : Oxidizing

- **R Phrase(s)** : R8 : Contact with combustible material may cause fire.

- **S Phrase(s)** : S21 : When using do not smoke.
S45 : In case of accident or if you feel unwell, seek medical advice immediately (show the label when possible).

16 OTHER INFORMATION

Ensure all national/local regulations are observed.
Ensure operators understand the hazard of oxygen enrichment.
Contact with liquid may cause cold burns/frostbite.

This Safety Data Sheet has been established in accordance with the applicable European Directives and applies to all countries that have translated the Directives in their national laws.

Before using this product in any new process or experiment, a thorough material compatibility and safety study should be carried out.

Details given in this document are believed to be correct at the time of going to press. Whilst proper care has been taken in the preparation of this document, no liability for injury or damage resulting from its use can be accepted.

Recommended uses and restrictions : This SDS is for information purposes only and is subject to change without notice. [Prior to purchase of products, please contact your local AIR LIQUIDE office for a



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16 OTHER INFORMATION (continued)

complete SDS (with Manufacturer's name and emergency phone number).]

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